

Atty. Docket No. YOR20010010US1
(590.043)

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) An apparatus for compensating for interference in speech recognition, said apparatus comprising:

a first input medium which obtains an initial speech signal;

a second input medium which obtains at least one interfering signal, wherein said one interfering signal is not statistically independent of said initial speech signal;

a normalizing arrangement which reconciles the initial speech signal and at least one interfering signal with one another to produce a final speech signal; and

said normalizing arrangement being adapted to account for non-stationary noise in the at least one interfering signal;

wherein said reconciliation can be done in real-time; and

wherein said normalizing arrangement utilizes a multi-channel codeword-dependent cepstral normalization.

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2. **(Previously Presented)** The apparatus according to Claim 1, wherein said first input medium is adapted to obtain the initial speech signal in an environment where noise corresponding to the at least one interfering signal is present and said noise is not linearly time invariant coupled to said initial speech signal.

3. **(Original)** The apparatus according to Claim 2, wherein said second input medium is adapted to obtain solely the at least one interfering signal.

4. **(Original)** The apparatus according to Claim 1, wherein the final speech signal is a clean speech signal.

5. **(Original)** The apparatus according to Claim 1, wherein said normalizing arrangement is adapted to estimate at least one characteristic of the at least one reference signal given at least one characteristic of the initial speech signal.

6. **(Previously Presented)** The apparatus according to Claim 5, wherein said normalizing arrangement is further adapted to refer to a single codebook in estimating at least one characteristic of the at least one reference signal.

7. **(Original)** The apparatus according to Claim 6, wherein said normalizing arrangement is adapted to apply a compensation term to the initial speech signal in reconciling the initial speech signal and at least one interfering signal with one another.

8. **(Original)** The apparatus according to Claim 7, wherein said normalizing arrangement is adapted to estimate the compensation term via assessing its expectation value over a plurality of codewords in the codebook.

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9. **(Currently Amended)** A method of compensating for interference in speech recognition, said method comprising the steps of:

obtaining an initial speech signal;

obtaining at least one interfering signal, wherein said one interfering signal is not statistically independent of said initial speech signal; and

reconciling the initial speech signal and at least one interfering signal with one another to produce a final speech signal;

said reconciling step comprising the step of accounting for non-stationary noise in the at least one interfering signal;

wherein said reconciliation can be done in real-time; and

wherein said normalizing arrangement utilizes a multi-channel codeword-dependent cepstral normalization.

10. **(Previously Presented)** The method according to Claim 9, wherein said step of obtaining an initial speech signal comprises obtaining the initial speech signal in an environment where noise corresponding to the at least one interfering signal is present and said noise is not linearly time invariant coupled to said initial speech signal.

11. **(Original)** The method according to Claim 10, wherein said step of obtaining at least one interfering signal comprises obtaining solely the at least one interfering signal.

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12. **(Original)** The method according to Claim 9, wherein the final speech signal is a clean speech signal.

13. **(Original)** The method according to Claim 9, wherein said reconciling step comprises the step of estimating at least one characteristic of the at least one reference signal given at least one characteristic of the initial speech signal.

14. **(Previously Presented)** The method according to Claim 13, wherein said estimating step comprises referring to a single codebook.

15. **(Original)** The method according to Claim 14, wherein said reconciling step comprises the step of applying a compensation term to the initial speech signal.

16. **(Original)** The method according to Claim 15, wherein said estimating step comprises estimating the compensation term via assessing its expectation value over a plurality of codewords in the codebook.

17. **(Currently Amended)** A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for compensating for interference in speech recognition, said method comprising the steps of:

obtaining an initial speech signal;

obtaining at least one interfering signal, wherein said one interfering signal is not statistically independent of said initial speech signal; and

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reconciling the initial speech signal and at least one interfering signal with one
another to produce a final speech signal;

said reconciling step comprising the step of accounting for non-stationary noise in
the at least one interfering signal;

wherein said reconciliation can be done in real-time; and

wherein said normalizing arrangement utilizes a multi-channel codeword-
dependent cepstral normalization.